

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 to 7 (Canceled).

- 1 8. A computer implemented best indicator adaptive (BIA) method for demand
- 2 forecasting comprising the steps of:
 - 3 implementing a plurality of forecasting subsystems which make use of
 - 4 indicators Load (L), Ship (S) and Customer Acceptances (CA) history (CA_{hist});
 - 5 generating a forecast (CA_L) from Load (L) by modeling the ratio of
 - 6 quarter-to-date load to quarter CA actual as a random variable with gamma
 - 7 distribution so that the CA becomes a variable with generalized gamma
 - 8 distribution and computing the sample mean and sigma of the Load-to-CA
 - 9 ratio for a final forecasted CA_L demand;
 - 10 generating a forecast (CA_S) from Ship (S) by modeling the ratio of
 - 11 quarter-to-date ship to quarter CA actual as a random variable with gamma
 - 12 distribution so that the CA becomes a variable with generalized gamma
 - 13 distribution and computing the sample mean and sigma of the Ship-to-CA
 - 14 ratio for a final forecasted CA_S demand;
 - 15 generating a forecast (CA_{LS}) from Load and Ship (LS) by forecasting
 - 16 Customer Acceptances (CA) based on Load (L), Ship (S) and Customer
 - 17 Acceptances history (CA_{hist}) to generate CA_{LS} by estimating the functional
 - 18 relationship and the parameters relating the two ratios Load-to-CA and Ship-
 - 19 to-CA;
 - 20 generating a forecast from Customer Acceptances history (CA_{hist});
 - 21 refining the forecasts based on distribution demand using Customer
 - 22 Requested Date (CRAD) by
 - 23 generating a forecast from Load (L) and CRAD as $CA_{L,CRAD}$,
 - 24 generating a forecast from Ship (S) and CRAD as $CA_{S,CRAD}$, and

25 generating a forecast from Load (L) and Ship (S) and CRAD as
26 $CA_{LS,CRAD}$;
27 for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and
28 CA_{his} , determining a forecast error;
29 eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter
30 than a predetermined period;
31 for all remaining forecasts, selecting the forecast having the smallest
32 error; and
33 outputting the selected forecast as an optimum forecast.

1 9. A computer implemented best indicator adaptive (BIA) method for demand
2 forecasting comprising the steps of:
3 inputting Load (L), Ship (S) and Customer Acceptances (CA) quarterly
4 history (CA_{his}) data;
5 implementing a plurality of forecasting subsystems making use of four
6 sources of information, Load (L), Ship (S), Customer Acceptances quarterly
7 history (CA_{his}), and Customer Request Date (CRAD);
8 forecasting Customer Acceptances (CA) based on Load (L) to generate
9 CA_L by modeling a ratio of quarter-to-date load to quarter CA actual as a
10 random variable with gamma distribution so that the CA becomes a variable
11 with generalized gamma distribution whose mean and sigma can be easily
12 computed from the sample mean and sigma of the Load-to-CA ratio;
13 forecasting Customer Acceptances (CA) based on Ship (S) to generate
14 CA_S by modeling the ratio of quarter-to-date ship to quarter CA actual as a
15 random variable with gamma distribution so that the CA becomes a variable
16 with generalized gamma distribution whose mean and sigma can be easily
17 computed from the sample mean and sigma of the Ship-to-CA ratio;
18 forecasting Customer Acceptances (CA) based on Load (L), Ship (S)
19 and Customer Acceptances history (CA_{his}) to generate CA_{LS} by estimating the
20 functional relationship and the parameters relating the two ratios Load-to-CA

21 and Ship-to-CA;

22 using a log mean to sigma ratio of CRAD distribution, adjusting the

23 forecasts CA_L , CA_S and CA_{LS} to arrive at more accurate forecasts $CA_{L,CRAD}$,

24 $CA_{S,CRAD}$, and $CA_{LS,CRAD}$;

25 for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and

26 CA_{hor} , determining a forecast error;

27 eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter

28 than a predetermined period;

29 eliminating any other forecast due to expert knowledge;

30 for all remaining forecasts, selecting the forecast having the smallest

31 error; and

32 outputting the selected forecast as the final optimum forecast.